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DATE: May 1, 2012

TO: Kelley Chase, EPA Region 3 OSC  
Cynthia Caporale, EPA Region 3 OASQA

THROUGH: **Ex. 4 - CBI** RAS Program Manager  
SERAS QA/QC Officer

FROM: **Ex. 4 - CBI** QA/QC Chemist

SUBJECT: VERIFICATION/COMPLETENESS CHECK – DIMOCK, PA LABORATORY DATA  
File NAREL 1100245-RA226.pdf

## INTRODUCTION

On May 1, 2012, a review of the case narratives and corresponding certificates of analysis from the U.S. EPA National Air and Radiation Environmental Laboratory (NAREL Reports Posted April 18) was conducted at the SERAS facility in accordance with the Follow-Up Verification/Completeness Check agreed upon during our teleconference on Wednesday 2/8/12.

The assumptions for this review include the following: 1) Case narratives from the EPA and Regional labs and/or subcontract labs have been reviewed in accordance with EPA, Regional or Environmental Services Assessment Team (ESAT) protocols and contain all pertinent and complete information to conduct the completeness check. SERAS will base this review on the information provided by the laboratory and not on an actual data package; and 2) SERAS will relay any “red” flags to the EPA R3 personnel to resolve and determine data usability.

## OBSERVATIONS

In accordance with Table 1 – Field and QC Sampling Summary (Rev01 - 2/3/12), Table 2 – Sample Analytical Requirements Summary (Rev01 – 2/3/12), Methods for Groundwater and Surface Water, NAREL AM/SOP-14 Radium-226 Analysis in Water by Eichrom and the validation guidelines developed by SERAS for radiochemical data (using critical value of 1.65), the following observations were noted and need to be clarified/resolved.

File NAREL 1100245-RA226.pdf

1. Raw data were not provided; therefore, it is assumed that all sample, method blank and QC results (LCS, Duplicates) were correctly transferred to the analytical result tables.
2. The absolute value of the sample was less than the  $2\sigma$  uncertainty. The following results should be qualified as non-detect “U”: Ra226 for sample FB08.
3. The sample result was less than the  $2\sigma$  uncertainty and the MDC and the uncertainty multiplied by 1.65 is greater than the MDC indicating that the MDC may be reported too low. The following results should be qualified non-detect “UJ”: Ra226 for samples FB09, HW42Z, HW42, HW46, HW41, HW28A, HW40 and HW09.
4. The following sample results failed the NAD criteria (based on the method blank or field blank). Ra226 for samples HW46-P, HW41-P, HW28A-P, HW40-P, FB10, HW09-P and HW28B-P should be qualified estimated “J”.
5. It is assumed that all required instrument/system criteria were met by the laboratory or had no impact on the data.

cc: **Ex. 4 - CBI** SERAS Project Officer  
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